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Safety data sheet

Dilution buffer

1. Identification of the product (substance or mixture) and supplier/company

1.1 Product identifiers

Product: Dilution buffer
Catalogue no.: CT348
Brand: U-CyTech biosciences
REACH no.: This product is a mixture. A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

1.2 Relevant identified uses of the product and uses advised against

Identified uses: Laboratory chemicals. To be used in U-CyTech ELISPOT systems.
For professional (R&D) use only, not for food, drug, household or other uses.

1.3 Details of the supplier of the safety data sheet

Supplier: U-CyTech biosciences
Yalelaan 42
3584 CM Utrecht
The Netherlands
Phone: +31 85 073 1460
E-mail: info@ucytech.com

1.4 Emergency telephone number

Contact your local emergency number.

2. Hazard identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) no. 1272/2008 and its amendments

Skin sensitization (Category 1): H317: May cause an allergic skin reaction.
Chronic aquatic toxicity (Category 3): H412: Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labeling according to Regulation (EC) no. 1272/2008 and its amendments

Pictogram: 

Signal word: Warning

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Hazard statement(s): H317: May cause an allergic skin reaction.
H412: Harmful to aquatic life with long lasting effects.

Precaution statement(s): P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P333 + P313: If skin irritation or a rash occurs: Get medical advice/attention.

P337 + P313: If eye irritation persists get medical advice/attention.

Supplemental hazard information: EUH208: Contains CMIT/MIT. May produce an allergic reaction.
EUH210: Safety data sheet available on request.

2.3 Other hazards

This mixture contains no components considered to be either persistent, bio-accumulative and toxic (PBT), or very persistent and very bio-accumulative (vPvB) at levels of 0.1% or higher.

3. Composition/information on ingredients

3.2 Mixtures

Product name: Dilution buffer

Synonyms: -

Description: Aqueous solution of organic / inorganic compounds.

Hazardous ingredients:

Cas no.	EC no.	Index no.	Classification	Concentration
Proclin 300 (mixture of: CMIT/MIT: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one [3:1])				
55965-84-9	911-418-6	613-167-00-5	Acute Tox. 2 (H310, H330), Acute Tox. 3 (H301), Skin Corr. 1C (H314), Eye Dam. 1 (H318), Skin Sens. 1A (H317), Aquatic Acute 1 (H400; M=100), Aquatic Chronic 1 (H410; M=100); EUH071 Concentration limits: ≥ 0.6%: Skin Corr. 1C, H314 ≥ 0.06% - < 0.6%: Skin Irrit. 2, H315 ≥ 0.0015% - < 0.06%: Skin Sens. 1A, H317 ≥ 0.6%: Eye Dam. 1, H318 ≥ 0.06% - < 0.6%: Eye Irrit. 2, H319	0.0273% (w/w)

Proclin is a registered trademark of Rohn and Haas Company.

For the full text of the Hazard statements and Risk phrases mentioned in this section, see section 16 of this safety data sheet (SDS).

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4. First aid measures

4.1 Description of first aid measures

General advice: Consult physician and show this SDS.

After contact with skin: Remove contaminated clothing and shoes. Wash contaminated area with water / shower. In case of skin irritation consult a physician.

After swallowing: If the person is conscious, rinse mouth with plenty of water and make the person drink water (two glasses at most). Avoid vomiting. Consult a physician immediately.

After contact with eyes: Rinse continuously with plenty of water for several minutes. Confirm adequate flushing by separating the eyelids. Remove contact lenses if present and easy to do – continue rinsing. In case of eye irritation consult an ophthalmologist.

After inhalation: Provide fresh air. If breathing becomes difficult, consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 2 and 11.

4.3 Indication of any immediate medical attention and special treatment needed

No further data available. Note to physician: treat symptomatically.

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Water spray, foam, carbon dioxide (CO_2), dry powder.

Unsuitable extinguishing media: For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from substance or mixture

Hazardous combustion products: none.

5.3 Advice for fire fighters

Stay in danger area only with self-contained breathing apparatus and protective clothing.

5.4 Further information

Prevent fire extinguishing water from contaminating surface water or the ground water system.

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment to avoid exposure (section 8). Follow general safety rules for laboratories. Evacuate personnel to safe areas in case of an emergency.

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6.2 Environmental precautions

Do not let product enter surface water, (sub)soil or drains. Prevent further leakage if safe to do so. If large amounts of the mixture contaminate drains, inform appropriate authorities in accordance with local regulation.

6.3 Methods and materials for containment and cleaning up

Cover drains. Contain spillage. Take up with inert absorbent material and keep in suitable, closed containers for disposal (section 13). Observe possible material restrictions (sections 7 and 10).

7. Handling and storage

7.1 Precautions for safe handling

Safe handling: For laboratory use only. Ensure adequate ventilation. Handle and open container with care. Always close container tightly after removal of product. Avoid formation of aerosols. Avoid exposure.

Hygiene measures: Follow general safety rules for laboratories. Wear personal protective equipment to avoid (prolonged or repeated) exposure (section 2.2 and 8). Immediately change contaminated clothing. Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Safe storage: Store at 2-8°C, in dry and well-ventilated place. Keep container tightly closed.

7.3 Specific end use(s)

Use in laboratories.

8. Exposure controls/personal protection

8.1 Control parameters

This product does not contain substances above concentration limits fixing an occupational exposure limit.

8.2 Exposure controls

General protective and hygiene measures

Facilities storing or utilizing this product should be equipped with an eyewash facility, a safety shower and mechanical exhaust. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday. Immediately change contaminated clothing. Keep away from food and beverages.

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Personal protective equipment

Eye protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN166 (EU). Use tightly fitting safety goggles.

Skin and body protection

Wear appropriate protective gloves and a lab coat to prevent skin exposure.
Protective gloves must satisfy the specifications of Regulation (EU) 2016/425 and the standard EN374 derived from it. Observe the instructions regarding permeability and breakthrough time which are provided by the suppliers of the gloves. Make sure the gloves are suitable for the task regarding chemical compatibility, dexterity, operational conditions and user susceptibility (e.g. sensation effects). Take also the specific local conditions under which the product is used into consideration (e.g. danger of cuts).
Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
This recommendation applies only to the product stated in this SDS and for the designed use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves.

Respiratory protection

Required when aerosols are generated, when workers are facing concentrations above the exposure limits or where risk assessment shows air-purifying respirators are appropriate.
Use respirators and components tested and approved under appropriate government standards such as NIOHS (US) or CEN (EU).
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly.

Control of environmental expose

Do not let product enter drains.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

A. Appearance (at 20 °C):	Light yellow liquid (transparent) (at 20 °C).
B. Odor:	Odorless.
C. Odor threshold:	Does not apply, mixture is odorless.
D. pH (at 20°C):	7.2 ± 0.2
E. Melting/freezing point:	No data available.
F. Initial boiling and boiling range:	No data available.
G. Flash point:	No data available.
H. Evaporation rate:	No data available.
I. Flammability (solid, gas):	Does not apply.
J. Upper/lower flammability or explosive limits:	Does not apply, mixture is not flammable.

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K. Vapor pressure:	No data available.
L. Vapor density:	No data available.
M. Relative density:	1.1 (at 20 °C).
N. Solubility(ies):	Does not apply, mixture is an aqueous solution.
O. Partition coefficient: n-octanol/water:	No data available.
P. Auto-ignition temperature:	No data available.
Q. Decomposition temperature:	No data available.
R. Viscosity:	No data available.
S. Explosive properties:	Does not apply, mixture is not explosive.
T. Oxidizing properties:	None.

9.2 Other information

No additional information relevant to safe use of the mixture.

10. Stability and reactivity

10.1 Reactivity

No specific test data related to reactivity available for this mixture or its ingredients.

10.2 Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to recommended conditions of storage, use and temperature. Violent reactions possible with the generally known reaction partners of water.

10.4 Conditions to avoid

No specific conditions to avoid.

10.5 Incompatible materials

No data available.

10.6 Hazardous decomposition products

Does not decompose when used for intended uses (section 1.2).

11. Toxicological information

11.1 Information on toxicological effects

Mixture

Acute toxicity:	No data available.
Skin corrosion/irritation:	No data available.
Serous eye damage/irritation:	No data available.
Respiratory/skin sensitization:	No data available.
Germ cell mutagenicity:	No data available.

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Carcinogenicity: No data available.
Reproductive toxicity: No data available.
Specific target organ toxicity (single and repeated): No data available.
Aspiration hazard: No data available.

11.2 Additional information

Signs and symptoms of exposure:
To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Potential health effects:
Inhalation: May be harmful if inhaled and may cause respiratory tract irritation.
Skin: May be harmful if absorbed through skin and may cause skin irritation.
Eyes: May cause eye irritation.
Ingestion: May be harmful if swallowed.
Further hazardous properties cannot be excluded. The product should be handled with the care usual when dealing with chemicals.

Hazardous ingredient (section 3.2): Proclin 300:
Acute toxicity: LD50 oral - rat - 53 mg/kg.
Skin corrosion/irritation: Skin - rabbit: result: corrosive.
Serous eye damage/irritation: Eyes - rabbit: result: corrosive.
Respiratory/skin sensitization: Guinea pig: may cause sensitization by skin contact.
Ingredient may cause an allergic skin reaction.
Germ cell mutagenicity: No data available.
Carcinogenicity: No data available.
Reproductive toxicity: No data available.
Specific target organ toxicity (single and repeated): No data available.
Aspiration hazard: No data available.

12. Ecological information

Mixture

12.1 Toxicity: No data available.
12.2 Persistence and degradability: No data available.
12.3 Bio-accumulative potential: No data available.
12.4 Mobility in soil: No data available.
12.5 Results of PBT and vPvB assessment: This substance/mixture contains no components considered to be either PBT or vPvB at levels of 0.1% or higher.
12.6 Other adverse effects: No data available.

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13. Disposal considerations

13.1 Waste treatment methods

Product: The generation of waste should be avoided or minimized wherever possible. Waste material must be disposed in accordance with local, regional and national/federal regulations. Do not let product enter drains.

Packaging: Dispose of as unused product.

14. Transport information

14.1 UN number (ADR, RID, ADN, IMDG, IATA): Not applicable.
14.2 UN proper shipping name (ADR, RID, ADN, IMDG, IATA): Not dangerous.
14.3 Transport hazard class(es) (ADR, RID, ADN, IMDG, IATA): Not applicable.
14.4 Packing group (ADR, RID, ADN, IMDG, IATA): Not applicable.
14.5 Environmental hazards: None.
14.6 Special precautions for user: Not applicable.
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code: Not applicable.

15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Authorizations and/or restrictions on use: None.
German Water hazard class: WGK2 (self-classified).
German Storage class: Class 12 (self-classified).

15.2 Chemical Safety Assessment

For this mixture a chemical safety assessment has not been carried out.

16. Other information

Reason for revision: Layout change. Name change from Dilution buffer R to Dilution buffer.

Text of Hazard statements and Risk phrases mentioned in section 3:

Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic toxicity
Aquatic Chronic	Chronic aquatic toxicity
Eye Dam.	Eye damage
Eye Irrit.	Eye irritation
Skin Corr.	Skin corrosion
Skin Irrit.	Skin irritation
Skin Sens.	Skin sensitization
H301	Toxic if swallowed
H310	Fatal in contact with skin

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H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H317	May cause allergic skin reaction
H318	Causes serious eye damage
H319	Causes serious eye irritation
H330	Fatal if inhaled
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Abbreviations and acronyms:

ADN:	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS:	Chemical Abstract Service
CE:	Conformité Européenne
CEN:	European Committee for Standardization
CET:	Central European Time
CMIT/MIT:	5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-2H-isothiazol-3-one
EC:	European Commission
EC no:	European Chemical number
EU:	European Union
IATA:	International Air Transport Association
IBC code:	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in bulk
IMDG:	International Maritime Dangerous Goods
LD50:	Lethal dose, 50%
Marpol:	Marine Pollution
M-factor:	multiplication factor
NIOSH:	National Institute for Occupational Safety & Health
No:	Number
PBT:	Persistent, bio-accumulative and toxic
R&D:	Research & Development
REACH:	Registration, Evaluation, Authorization and restriction of Chemicals
RID:	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS:	Safety data sheet
UN:	United Nations
US:	United States
WGK:	German Water Endangerment Class
vPvB:	Very persistent and very bio-accumulative

Further information

The information provided in this SDS is to the best of our knowledge and present information. The information is described as a guidance for safe handling and is not considered a warranty or quality specification. The information is only applicable to the described product and may not be valid for such products used in combination with any other products, materials or in any process, unless specified in the text. U-CyTech B.V. shall not be held liable for any damage resulting from handling or from contact with the above product.